

Appendix (online-only material) from Peyroteo Stjerna, R. 2016. On Death in the Mesolithic. Or the Mortuary Practices of the Last Hunter-Gatherers of the South-Western Iberian Peninsula, 7th–6th Millennium BCE. Department of Archaeology and Ancient History. *Occasional Papers in Archaeology* 60. 511 pp. Uppsala. ISSN 1100-6358. ISBN 978-91-506-2525-7.

Contents

Appendix to chapters 3 and 4	3
Tagus valley, Moita do Sebastião.....	4
Tagus valley, Cabeço da Arruda	5
Tagus valley, Cabeço da Amoreira.....	6
Tagus valley, Cova da Onça	8
Sado valley, Arapouco.....	9
Sado valley, Cabeço das Amoreiras	10
Tagus valley, Vale de Romeiras	10
Sado valley, Cabeço do Pez.....	11
Sado valley, Várzea da Mó.....	11
Sado valley, Poças de S. Bento	12
Model-definition command files for ^{14}C calibration	13

Appendix to chapters 3 and 4

Table A1. Radiocarbon dating programme 2012–13: rejected samples of doubtful quality. Three samples (Ua–46937, Ua–47968, and Ua–47969) did not yield enough collagen for reliable ^{14}C measurements. In three samples (Ua–47970, Ua–47971, and Ua–47972) the C:N ratio is higher than the acceptance range (2.9–3.6). In two samples (Ua–46938 and Ua–46940) the C:N ratio is within the 3.4–3.6 range suggesting contamination which is confirmed by the high $\delta^{15}\text{N}$ values (34.5‰ and 21.5 ‰ respectively) which are out of range.

Valley	Site	Ind.	E _{xxi}	Museum	Lab no.	^{14}C Age BP	$\delta^{13}\text{C}$ (‰) VPDB	$\delta^{15}\text{N}$ (‰) AIR	C:N
Tagus	Moita do Sebastião	14	1952–54	MHNUP	Ua–47979	5145±62	–22.2	2.1	5.1
Sado	Arapouco	1	1961	MNA	Ua–46937	3693±56	–	–	not measurable
Sado	Arapouco	3	1961	MNA	Ua–46938	7238±46	–18.6	34.5	3.5
Sado	Arapouco	5	1961	MNA	Ua–47968*	4053±134	–	–	not measurable
Sado	Arapouco	6	1961	MNA	Ua–47969*	5151±72	–	–	not measurable
Sado	Arapouco	7	1961	MNA	Ua–47970*	5021±94	–23.6	4.8	4.5
Sado	Arapouco	8	1961	MNA	Ua–47971*	4669±48	–22.4	1.4	4.2
Sado	Arapouco	11	1961	MNA	Ua–46940	7336±47	–17.6	21.5	3.5
Sado	Arapouco	13	1961	MNA	Ua–47972*	5710±53	–21.8	5.1	4.7
Sado	Cabeço das Amoreiras	3	1958	MNA	Ua–46935	6259±43	–21.2	24.6	3.7
Sado	Cabeço das Amoreiras	8	1958	MNA	Ua–46936	4046±57	–	–	not measurable
Sado	Vale de Romeiras	4	1959	MNA	Ua–46967	5979±49	–21.1	8.3	3.7
Sado	Vale de Romeiras	7	1959	MNA	Ua–47982*	4912±60	–	–	not measurable
Sado	Vale de Romeiras	11	1959	MNA	Ua–46969	4971±95	–	–	not measurable
Sado	Vale de Romeiras	12	1959	MNA	Ua–47984*	5841±63	–22.1	6.9	4.6
Sado	Vale de Romeiras	13	1959	MNA	Ua–47985*	2410±47	–25.6	–0.8	12.4
Sado	Vale de Romeiras	14	1959	MNA	Ua–46970	5684±60	–21.5	8.9	4.0
Sado	Vale de Romeiras	16	1959	MNA	Ua–46971	6499±43	–21.5	8.6	3.7
Sado	Vale de Romeiras	18	1959	MNA	Ua–47986	6113±47	–21.2	6.8	3.7
Sado	Vale de Romeiras	20	1959	MNA	Ua–47987*	5633±67	–23.1	5.8	4.7
Sado	Vale de Romeiras	22	1959	MNA	Ua–47988*	4480±62	–	–	not measurable

*pre-treated with boiling in acetone, ultrasonification first with ether and then with ethanol, and finally filtrated. After that processed as usual (see chapter 3, *In the laboratory: pre-treatment and measurement of samples in this study*).

Table A2. Reliable measurements excluded from the present study. Calibrated with OxCal 4.2 (Bronk Ramsey 2009) using atmospheric curve IntCal 13 (Reimer et al. 2013).

Identification of the human remains				Measurements				Calibrated date range (95% confidence)				Reference	Reason for exclusion	
Individual	Excav. Museum	Age	Sex	Bone	Lab no.	^{14}C Age BP	$\delta^{13}\text{C}$ (‰) VPDB	$\delta^{15}\text{N}$ (‰) AIR	C:N	% marine (± 10) M1 M2				
Sado valley, unknown	Unknown MNA	Adult	♀	Fibula-L	Ua-46939	6821±44	-19.3 *	-	3.4	21	9	5787-5634 cal BCE (m1) 5787-5633 cal BCE (m2)	This study	Paraffined block Mislabelled; provenience is unknown
Sado valley, unknown	Unknown MNA	Adult	♀	Tibia	n/p	analysis for isotopes	-20.0	9.0	3.0	14	0	-	Fontanals-Coll et al. 2014	Paraffined block Mislabelled; provenience is unknown
VR1959, Sk8	1959 MNA	Non-adult, 3-4 yrs ±12 m.	n/d	Tibia	Ua-46968	380±30	-18.3	-	3.4	30	21	1445-1632 cal CE (M1) 1445-1631 cal CE (M2)	This study	Modern

Tagus valley, Moita do Sebastião

Table A3. Moita do Sebastião, Tagus valley: ^{14}C measurements (2) from non-human samples. Calibrated with OxCal 4.2 (Bronk Ramsey 2009) using atmospheric curve IntCal 13 (Reimer et al. 2013).

^{14}C measurement			Calibrated date range (68% confidence)			Calibrated date range (95% confidence)			Reference
Excavation/ Context	Sample	Lab no.	^{14}C Age BP	Cal BP	Cal BCE	Cal BP	Cal BCE	Cal BP	Reference
1952-54/ Bottom level	Charcoal (unidentified sp.)	H-2119/1546	7080 \pm 130	8018-7758	6069-5809	8170-4672	6221-5723	8170-4672	Delibrias and Roche 1965
1954/ Bottom level under shell layers	Charcoal (unidentified sp.)	Sa-16	7350 \pm 350	8541-7831	6592-5882	9019-7565	7070-5616	9019-7565	Roche 1957

Tagus valley, Cabeço da Arruda

Table A4. *Cabeço da Arruda, Tagus valley: ¹⁴C measurements (5) from non-human samples. Calibrated with OxCal 4.2 (Bronk Ramsey 2009) using atmospheric curve IntCal 13 (Reimer et al. 2013). *Uncertain calibration because $\delta^{13}\text{C}$ has not been published (calibrated based on assumed 100‰ terrestrial diet).*

¹⁴ C measurement									
Excavation/ Context	Sample	Lab no.	¹⁴ C Age BP	Calibrated date range (68% confidence)		Calibrated date range (95% confidence)		Reference	
				Cal BP	Cal BCE	Cal BP	Cal BCE		
1960s	Charcoal (unidentified sp.)	Sa-196	5150±300	6271–5606	4322–3657	6655–5145	4706–3196	Roche 1965	
Upper levels, layers 3–6 from shell bed									
1960s	Charcoal (unidentified sp.)	Sa-197	6430±300	7595–6989	5646–5040	7926–6670	5977–4721	Roche 1965	
Lower levels, layers 41–45 from basal sand									
19 th c. excavation breccia within skull of a child	Charcoal (unidentified sp.)	Beta-271927	7060±40	7940–7853	5991–5904	7965–7796	6016–5847	Jacks et al. 2013	
19 th c. excavation	<i>Canis familiaris</i> *	Beta-152956	7070±40	7951–7860	6002–5911	7972–7800	6023–5851	Detry & Cardoso 2010	
2000	Charcoal (unidentified sp.)	TO-10215	7410±70	8327–8176	6378–6227	8375–8049	6426–6100	Roksandic 2006	

Tagus valley, Cabeço da Amoreira

Table A5. *Cabeço da Amoreira, Tagus valley: Human bone collagen samples. ^{14}C measurements and estimation of non-terrestrial carbon intake (% marine). Samples are sorted by lowest to highest % marine. Marine percentage was estimated from the measured $\delta^{13}\text{C}$ value of each sample by the application of method marine 1 and method marine 2, based on adopted endpoint values of -12‰ and -20‰ for marine (100%) and terrestrial (100%) diets respectively.*

Ind.	Identification of the human remains		Measurements (^{14}C by AMS; $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ by IRMS)		^{14}C Age BP	$\delta^{13}\text{C}$ (‰) VPDB	$\delta^{15}\text{N}$ (‰) AIR	C:N	% marine (± 10)		Reference
	Excav.	Museum	Lab no.						M1	M2	
CAM-01-01 (139)	2001	–	TO-10225		6550 \pm 70	-20.1	8.1	n/p	14	0	Roksandic 2006
CAM-01-01	20001	–	Wk-26796		6329 \pm 40	-16.9	12.3	n/p	44	39	Bicho et al. 2011
CAM-00-01	2001	–	TO-10218		6630 \pm 60	-17.1	n/a	n/a	42	36	Roksandic 2006
CAM-00-01	2001	–	TO-11819-R (replaces TO-10218, Meiklejohn et al. 2009)		7300 \pm 80	-16.4	n/a	n/a	50	46	Meiklejohn et al. 2009
Burial 2011.1 Child, bottom	2011	–	Wk-32143		7132 \pm 41	-16.0	13.9	n/p	53	50	Bicho et al. 2013
Burial 2011.2 Adult ♀, 20–25 yrs top	2011	–	Wk-32142		6910 \pm 40	-15.8	-12.9	n/p	54	53	Bicho et al. 2013
7	1930s	MHNUP	Beta-127450		6850 \pm 40	AMS: -16.5	AMS: 11.9	n/p	–	–	Cunha and Cardoso 2001; 2002–03; Cunha et al. 2003

Table A6. *Cabeço da Amoreira, Tagus valley: ¹⁴C measurements (6) on human bone collagen. Calibrated with OxCal 4.2 (Bronk Ramsey 2009) using atmospheric curve IntCal 13 (Reimer et al. 2013).*

a) cal BCE

<i>Individual</i>	<i>Lab no.</i>	<i>¹⁴C Age BP</i>	<i>Reference</i>	Unmodelled (cal BCE) Marine 1 Calibrated date range (95% confidence)	Modelled (cal BCE) Marine 1 <i>Posterior density estimate</i> (95% probability)	Unmodelled (cal BCE) Marine 2 Calibrated date range (95% confidence)	Modelled (cal BCE) Marine 2 <i>Posterior density estimate</i> (95% probability)
CAM-01-01	Wk-26796	6329±40	Bicho et al. 2011	5214–4851	5292–4921	5280–4856	5293–4961
CAM-00-01	TO-10218	6630±60	Roksandic 2006	5512–5222	5508–5224	5551–5255	5552–5253
CAM-01-01 (139)	TO-10225	6550±70	Roksandic 2006	5616–5300	5613–5296	5456–5031	5452–5053
Burial 2011.2	Wk-32142	6910±40	Bicho et al. 2013	5676–5461	5666–5466	5676–5465	5666–5470
Burial 2011.1	Wk-32143	7132±41	Bicho et al. 2013	5891–5630	5878–5633	5905–5636	5891–5641
CAM-00-01	TO-11819-R	7300±80	Meiklejohn et al. 2009	6097–5721	6048–5702	6159–5731	6062–5717

b) Cal BP

<i>Individual</i>	<i>Lab no.</i>	<i>¹⁴C Age BP</i>	<i>Reference</i>	Unmodelled (BP) Marine 1 Calibrated date range (95% confidence)	Modelled (BP) Marine 1 <i>Posterior density estimate</i> (95% probability)	Unmodelled (BP) Marine 2 Calibrated date range (95% confidence)	Modelled (BP) Marine 2 <i>Posterior density estimate</i> (95% probability)
CAM-01-01	Wk-26796	6329±40	Bicho et al. 2011	7163–6800	7241–6870	7229–6805	7242–6910
CAM-00-01	TO-10218	6630±60	Roksandic 2006	7461–7171	7457–7173	7500–7204	7501–7202
CAM-01-01 (139)	TO-10225	6550±70	Roksandic 2006	7565–7249	7562–7245	7405–6980	7401–7002
Burial 2011.2	Wk-32142	6910±40	Bicho et al. 2013	7625–7410	7615–7415	7625–7414	7615–7419
Burial 2011.1	Wk-32143	7132±41	Bicho et al. 2013	7840–7579	7827–7582	7854–7585	7840–7590
CAM-00-01	TO-11819-R	7300±80	Meiklejohn et al. 2009	8046–7670	7997–7651	8108–7680	8011–7666

Tagus valley, Cova da Onça

Table A7. Cova da Onça, Tagus valley, ^{14}C measurement on human bone collagen. The $\delta^{13}\text{C}$ published along with this measurement (Beta-127448) was obtained by AMS and cannot be used for dietary reconstructions or reservoir corrections (Millard 2014, 557; Taylor and Bar-Yosef 2014, 117).

^{14}C measurement						
Excavation/ Context	Sample	Lab no.	^{14}C Age BP	$\delta^{13}\text{C}$ (‰) VPDB	$\delta^{15}\text{N}$ (‰) AIR	C:N
Unknown	Human tibia	Beta-127448	7140±40	AMS: -17.2	n/a	n/a
						Cunha and Cardoso 2002-03

Sado valley, Arapouco

Table A8. *Arapouco, Sado valley: ^{14}C measurement from a non-human sample. Calibrated with OxCal 4.2 (Bronk Ramsey 2009) using atmospheric curve IntCal 13 (Reimer et al. 2013).*

^{14}C measurement		Calibrated date range (68% confidence)				Calibrated date range (95% confidence)		Reference
Excavation/Context	Sample	Lab no.	^{14}C Age BP	Cal BP	Cal BCE	Cal BP	Cal BCE	Reference
1961–62/Middle layers	Shells (unidentified sp.)	Q-2492	7420 \pm 65	8162–7816	6213–5867	8323–7655	6374–5706	Arnaud 1989

Table A9. *Arapouco, Sado valley: individuals previously sampled for stable isotope analyses (11) which samples did not yield enough collagen. All samples were collected at MN.A. Age and sex estimation by C. Umbelino (1999) otherwise by * M. Fontanals-Coll and colleagues (2014).*

Identification of the human remains			Measurements ($\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ by IRMS)					Reference	
Individual	Age	Sex	Bone	Lab no.	$\delta^{13}\text{C}$ (‰)	VPTDB	$\delta^{15}\text{N}$ (‰)	AIR	C:N
1, 1961	Adult	♂	Rib	n/p	–	–	–	–	–
1, 1961	Adult	♂	Long bone 999.49.15	7740	–	–	–	–	–
4, 1961	Adult, mature	♀	Long bone 999.72.33	7744	–	–	–	–	–
7, 1961*	Adult	n/d	Long bone	n/p	–	–	–	–	–
9, 1961	Adult	♀	Long bone	n/p	–	–	–	–	–
9, 1961	Adult	♀	Long bone 99.70.39	6881	–	–	–	–	–
13, 1961	15 yrs \pm 36 m.	n/d	Long bone 999.61.18	6882	–	–	–	–	–
3A, 1962*	Adult	n/d	Humerus	n/p	–	–	–	–	–
5A, 1962	Adult, mature	♂	Long bone 999.58.72	7743	–	–	–	–	–
13A1	Adult, young	♀	Rib 999.52.12	7738	–	–	–	–	–
15A	Adult, mature	♂	Long bone 999.59.79	6883	–	–	–	–	–

Sado valley, Cabeço das Amoreiras

Table A10. *Cabeço das Amoreiras, Sado valley: ^{14}C measurements (2) from non-human samples. Calibrated with OxCal 4.2 (Bronk Ramsey 2009) using atmospheric curve IntCal 13 (Reimer et al. 2013).*

^{14}C measurement		Sample	Lab no.	^{14}C Age BP	Calibrated date range (68% confidence)		Calibrated date range (95% confidence)		Reference
Excavation/ Context					Cal BP	Cal BCE	Cal BP	Cal BCE	
1985–86/ Layer 2a, structure B		Charcoal (unidentified sp.)	Q-AM85B2a	5990 \pm 75	6930–6741	4981–4792	7148–6656	5199–4707	Arnaud 2000
1985–86/ Layer 2b, structure B		Shells (unidentified sp.)	Q-AM85B2b	6370 \pm 70	7415–7254	5466–5305	7425–7170	5476–5221	Arnaud 2000

Tagus valley, Vale de Romeiras

Table A11. *Vale de Romeiras, Sado valley: ^{14}C measurements (3) from non-human samples. Calibrated with OxCal 4.2 (Bronk Ramsey 2009) using atmospheric curve IntCal 13 (Reimer et al. 2013).*

^{14}C measurement		Sample	Lab no.	^{14}C Age BP	Calibrated date range (68% confidence)		Calibrated date range (95% confidence)		Reference
Excavation/ Context					Cal BP	Cal BCE	Cal BP	Cal BCE	
1959/ Middle layers		Fauna* (unidentified sp.)	ICEN-144	7130 \pm 110	–	–	–	–	Arnaud 2000
1959/ Middle layers		Shells (unidentified sp.)	ICEN-146	7350 \pm 60	8285–8047	6336–6098	8319–8025	6370–6076	Arnaud 2000
1959/ Middle layers		Shells (unidentified sp.)	ICEN-150	7390 \pm 80	8335–8070	6386–6121	8365–8030	6416–6081	Arnaud 2000

*The calibration of ICEN-144 is problematic. $\delta^{13}\text{C}$ published along with this measurement (–17.4; Diniz and Arias 2012) was obtained by AMS and cannot be used for dietary reconstructions or reservoir corrections (Millard 2014, 557; Taylor and Bar-Yosef 2014, 117).

Sado valley, Cabeço do Pez

Table A12. *Cabeço do Pez, Sado valley: ¹⁴C measurements (4) from non-human samples. Calibrated with OxCal 4.2 (Bronk Ramsey 2009) using atmospheric curve IntCal 13 (Reimer et al. 2013).*

¹⁴ C measurement									
Excavation/ Context	Sample	Lab no.	¹⁴ C Age BP	Calibrated date range (68% confidence)		Calibrated date range (95% confidence)		Reference	
				Cal BP	Cal BCE	Cal BP	Cal BCE		
1983?/ Lower layers	Shells + Charcoal* (unidentified sp.)	Q-2498	3565±50	–	–	–	–	Arnaud 1989	
1983/ Upper layers	Fauna* (unidentified sp.)	Q-2499	5535±130	–	–	–	–	Arnaud 1989	
1983/ Middle layers	Shells (unidentified sp.)	Q-2496	6430±65	7423–7309	5474–5360	7467–7248	5518–5299	Arnaud 1989	
1983/ Middle layers	Shells (unidentified sp.)	Q-2497	6730±75	7663–7517	5714–5568	7699–7443	5750–5494	Arnaud 1989	

*Samples Q-2498 and Q-2499 are rejected. The calibration of these measurements is not possible because:

- Q-2498 is a sample of a conglomerate containing material from both terrestrial and aquatic nature
- Q-2499 is a sample of unidentified fauna and its ¹³C has not been published

Sado valley, Várzea da Mó

Table A13. *Várzea da Mó, Sado valley: ¹⁴C measurement from a non-human sample. Calibrated with OxCal 4.2 (Bronk Ramsey 2009) using atmospheric curve IntCal 13 (Reimer et al. 2013).*

¹⁴ C measurement									
Excavation/ Context	Sample	Lab no.	¹⁴ C Age BP	Calibrated date range (68% confidence)		Calibrated date range (95% confidence)		Reference	
				Cal BP	Cal BCE	Cal BP	Cal BCE		
1959/ Middle layers	Shells (unidentified sp.)	ICEN-273	7110±50	7982–7869	6033–5920	8016–7841	6067–5892	Arnaud 2000	

Sado valley, Poças de S. Bento

Table A14 Poças de S. Bento, Sado valley: ^{14}C measurements (5) from non-human samples. Calibrated with OxCal 4.2 (Bronk Ramsey 2009) using atmospheric curve IntCal 13 (Reimer et al. 2013).

^{14}C measurement									
Context	Sample	Lab no.	^{14}C Age BP	Calibrated date range (68% confidence)		Calibrated date range (95% confidence)		Reference	
				Cal BP	Cal BCE	Cal BP	Cal BCE		
Middle layers	Charcoal	Q-2494	6780 \pm 65	7671–7584	5722–5635	7756–7510	5807–5561	Arnaud 1989	
Middle layers	Shells	Q-2495	6850 \pm 70	7751–7613	5802–5664	7834–7580	5885–5631	Arnaud 1989	
Lower layers	Shells	Q-2493	7040 \pm 70	7947–7796	5998–5847	7980–7705	6031–5756	Arnaud 1989	
Level 65–70 cm	Shells	LU-2770	7050 \pm 60	7950–7834	6001–5885	7982–7738	6033–5789	Larsson 1996; Lars Larsson pers. com.	
Level 45–50 cm	Shells	LU-2769	7150 \pm 70	8030–7871	6081–5922	8160–7841	6211–5892	Larsson 1996; Lars Larsson pers. com.	

Model-definition command files for ¹⁴C calibration

Models defined in OxCal 4.2 (Bronk Ramsey 2009)

Code: Tagus Valley, Moita do Sebastião, Model 1, Marine 1

```
Plot("MoitaSebastiao_Model1_Marine1_Queries")
{
  Curve("IntCal13","IntCal13.14c");
  Curve("Marine13","Marine13.14c");
  Delta_R("Tagus",140,40);
  Sequence("Moita do Sebastiao_Burial Activity")
  {
    Boundary("Start of Burial Activity");
    Phase("Burial Activity")
    {
      Mix_Curves("Ua-46264_DietM1", "IntCal13", "Tagus", 43, 10);
      R_Date("Ua-46264", 7621, 50);
      Mix_Curves("Ua-46263_DietM1", "IntCal13", "Tagus", 43, 10);
      R_Date("Ua-46263", 7483, 48);
      Mix_Curves("TO-131_DietM1", "IntCal13", "Tagus", 51, 10);
      R_Date("TO-131", 7240, 70);
      Mix_Curves("TO-133_DietM1", "IntCal13", "Tagus", 44, 10);
      R_Date("TO-133", 7200, 70);
      Mix_Curves("Ua-46268_DietM1", "IntCal13", "Tagus", 50, 10);
      R_Date("Ua-46268", 7243, 45);
      Mix_Curves("TO-132_DietM1", "IntCal13", "Tagus", 45, 10);
      R_Date("TO-132", 7180, 70);
      Mix_Curves("TO-134_DietM1", "IntCal13", "Tagus", 46, 10);
      R_Date("TO-134", 7160, 80);
      Mix_Curves("Ua-46271_DietM1", "IntCal13", "Tagus", 50, 10);
      R_Date("Ua-46271", 7236, 41);
      Mix_Curves("Ua-46269_DietM1", "IntCal13", "Tagus", 39, 10);
      R_Date("Ua-46269", 7141, 40);
      Mix_Curves("Ua-47977_DietM1", "IntCal13", "Tagus", 44, 10);
      R_Date("Ua-47977", 7138, 42);
      Mix_Curves("Ua-46267_DietM1", "IntCal13", "Tagus", 44, 10);
      R_Date("Ua-46267", 7120, 43);
      Mix_Curves("Ua-47980_DietM1", "IntCal13", "Tagus", 45, 10);
      R_Date("Ua-47980", 7105, 42);
      Mix_Curves("Ua-46266_DietM1", "IntCal13", "Tagus", 44, 10);
      R_Date("Ua-46266", 7095, 45);
      Mix_Curves("Ua-47981_DietM1", "IntCal13", "Tagus", 39, 10);
      R_Date("Ua-47981", 7058, 44);
      Mix_Curves("Ua-46265_DietM1", "IntCal13", "Tagus", 34, 10);
      R_Date("Ua-46265", 6986, 40);
      Mix_Curves("Ua-47978_DietM1", "IntCal13", "Tagus", 31, 10);
      R_Date("Ua-47978", 6753, 46);
      Mix_Curves("TO-135_DietM1", "IntCal13", "Tagus", 59, 10);
      R_Date("TO-135", 6810, 70);
      Mix_Curves("Ua-46270_DietM1", "IntCal13", "Tagus", 30, 10);
      R_Date("Ua-46270", 6743, 44);
      Span("Site Use for Burial Activity");
      Interval("Interval of Burial Activity Use");
    };
    Boundary("End of Burial Activity");
  };
};
```

Code: Tagus Valley, Moita do Sebastião, Model 1, Marine 2

```
Plot("MoitaSebastiao_Model1_Marine2_Queries ")
{
  Curve("IntCal13","IntCal13.14c");
  Curve("Marine13","Marine13.14c");
  Delta_R("Tagus",140,40);
```

```
Sequence("Moita do Sebastiao_Burial Activity ")
{
  Boundary("Start of Burial Activity");
  Phase("Burial Activity")
  {
    Mix_Curves("Ua-46270_DietM2", "IntCal13", "Tagus", 20, 10);
    R_Date("Ua-46270", 6743, 44);
    Mix_Curves("Ua-47978_DietM2", "IntCal13", "Tagus", 23, 10);
    R_Date("Ua-47978", 6753, 46);
    Mix_Curves("Ua-46265_DietM2", "IntCal13", "Tagus", 26, 10);
    R_Date("Ua-46265", 6986, 40);
    Mix_Curves("Ua-47981_DietM2", "IntCal13", "Tagus", 33, 10);
    R_Date("Ua-47981", 7058, 44);
    Mix_Curves("Ua-46269_DietM2", "IntCal13", "Tagus", 33, 10);
    R_Date("Ua-46269", 7141, 40);
    Mix_Curves("Ua-46263_DietM2", "IntCal13", "Tagus", 38, 10);
    R_Date("Ua-46263", 7483, 48);
    Mix_Curves("Ua-46264_DietM2", "IntCal13", "Tagus", 38, 10);
    R_Date("Ua-46264", 7621, 50);
    Mix_Curves("Ua-46266_DietM2", "IntCal13", "Tagus", 39, 10);
    R_Date("Ua-46266", 7095, 45);
    Mix_Curves("Ua-46267_DietM2", "IntCal13", "Tagus", 39, 10);
    R_Date("Ua-46267", 7120, 43);
    Mix_Curves("Ua-47977_DietM2", "IntCal13", "Tagus", 39, 10);
    R_Date("Ua-47977", 7138, 42);
    Mix_Curves("TO-133_DietM2", "IntCal13", "Tagus", 39, 10);
    R_Date("TO-133", 7200, 70);
    Mix_Curves("Ua-47980_DietM2", "IntCal13", "Tagus", 40, 10);
    R_Date("Ua-47980", 7105, 42);
    Mix_Curves("TO-132_DietM2", "IntCal13", "Tagus", 40, 10);
    R_Date("TO-132", 7180, 70);
    Mix_Curves("TO-134_DietM2", "IntCal13", "Tagus", 41, 10);
    R_Date("TO-134", 7160, 80);
    Mix_Curves("Ua-46271_DietM2", "IntCal13", "Tagus", 46, 10);
    R_Date("Ua-46271", 7236, 41);
    Mix_Curves("Ua-46268_DietM2", "IntCal13", "Tagus", 48, 10);
    R_Date("Ua-46268", 7243, 45);
    Mix_Curves("TO-131_DietM2", "IntCal13", "Tagus", 49, 10);
    R_Date("TO-131", 7240, 70);
    Mix_Curves("TO-135_DietM2", "IntCal13", "Tagus", 59, 10);
    R_Date("TO-135", 6810, 70);
    Span("Site Use for Burial Activity");
    Interval("Interval of Burial Activity Use");
  };
  Boundary("End of Burial Activity");
};
```

Code: Tagus Valley, Moita do Sebastião, Hyp. Model 2, Marine 1

```
Plot("MoitaSebastiao_Model2_Marine1_Queries")
{
  Curve("IntCal13","IntCal13.14c");
  Curve("Marine13","Marine13.14c");
  Delta_R("Tagus",140,40);
  Sequence("Moita do Sebastiao_Phases of Burial Activity ")
  {
    Boundary("Start of Burial Activity");
    Sequence("Burial Activity 1")
    {
      Boundary("Start of Burial Activity 1");
      Phase("Burial Activity 1")
      {
        Mix_Curves("Ua-46264_DietM1", "IntCal13", "Tagus", 43, 10);
        R_Date("Ua-46264", 7621, 50);
        Mix_Curves("Ua-46263_DietM1", "IntCal13", "Tagus", 43, 10);
        R_Date("Ua-46263", 7483, 48);
        Span("Phase 1 Duration");
      };
      Boundary("End of Burial Activity 1");
    };
  };
};
```

```

};
Interval("Hiatus between Phases 1 and 2");
Sequence("Burial Activity 2")
{
Boundary("Start of Burial Activity 2");
Phase("Burial Activity 2")
{
Mix_Curves("TO-131_DietM1", "IntCal13", "Tagus", 51, 10);
R_Date("TO-131", 7240, 70);
Mix_Curves("TO-133_DietM1", "IntCal13", "Tagus", 44, 10);
R_Date("TO-133", 7200, 70);
Mix_Curves("TO-132_DietM1", "IntCal13", "Tagus", 45, 10);
R_Date("TO-132", 7180, 70);
Mix_Curves("Ua-46268_DietM1", "IntCal13", "Tagus", 50, 10);
R_Date("Ua-46268", 7243, 45);
Mix_Curves("Ua-46271_DietM1", "IntCal13", "Tagus", 50, 10);
R_Date("Ua-46271", 7236, 41);
Mix_Curves("TO-134_DietM1", "IntCal13", "Tagus", 46, 10);
R_Date("TO-134", 7160, 80);
Mix_Curves("Ua-46269_DietM1", "IntCal13", "Tagus", 39, 10);
R_Date("Ua-46269", 7141, 40);
Mix_Curves("Ua-47977_DietM1", "IntCal13", "Tagus", 44, 10);
R_Date("Ua-47977", 7138, 42);
Mix_Curves("Ua-46267_DietM1", "IntCal13", "Tagus", 44, 10);
R_Date("Ua-46267", 7120, 43);
Mix_Curves("Beta-127499_DietM1", "IntCal13", "Tagus", 45, 10);
R_Date("Beta-127499", 7120, 40);
Mix_Curves("Ua-46266_DietM1", "IntCal13", "Tagus", 44, 10);
R_Date("Ua-46266", 7095, 45);
Mix_Curves("Ua-47980_DietM1", "IntCal13", "Tagus", 45, 10);
R_Date("Ua-47980", 7105, 42);
Mix_Curves("Ua-47981_DietM1", "IntCal13", "Tagus", 39, 10);
R_Date("Ua-47981", 7058, 44);
Mix_Curves("Ua-46265_DietM1", "IntCal13", "Tagus", 34, 10);
R_Date("Ua-46265", 6986, 40);
Span("Phase 2 Duration");
};
Boundary("End of Burial Activity 2");
};
Interval("Hiatus between Phases 2 and 3");
Sequence("Burial Activity 3")
{
Boundary("Start of Burial Activity 3");
Phase("Burial Activity 3")
{
Mix_Curves("Ua-47978_DietM1", "IntCal13", "Tagus", 31, 10);
R_Date("Ua-47978", 6753, 46);
Mix_Curves("TO-135_DietM1", "IntCal13", "Tagus", 59, 10);
R_Date("TO-135", 6810, 70);
Mix_Curves("Ua-46270_DietM1", "IntCal13", "Tagus", 30, 10);
R_Date("Ua-46270", 6743, 44);
Span("Phase 3 Duration");
};
Boundary("End of Burial Activity 3");
};
Span("Burial Activity Duration");
Boundary("End of Burial Activity");
};
};

```

Code: Tagus Valley, Cabeço da Arruda, Model 1, Marine 1

```

Plot("CabecoArruda_Model1_Marine1_Queries")
{
Curve("IntCal13", "IntCal13.14c");
Curve("Marine13", "Marine13.14c");
Delta_R("Tagus", 140, 40);
Sequence("Cabeco da Arruda_Burial Activity")
{
Boundary("Start of Burial Activity");
Phase("Burial Activity")
{
Mix_Curves("", "IntCal13", "Tagus", 47, 10);
R_Combine("")
{
R_Date("Beta-127451", 7550, 100);
R_Date("AA-101343", 7351, 70);
};
Mix_Curves("Ua-46275_DietM1", "IntCal13", "Tagus", 39, 10);
R_Date("Ua-46275", 7263, 46);
Mix_Curves("Ua-47976_DietM1", "IntCal13", "Tagus", 45, 10);
R_Date("Ua-47976", 7261, 45);
Mix_Curves("Ua-46274_DietM1", "IntCal13", "Tagus", 39, 10);
R_Date("Ua-46274", 7200, 41);
Mix_Curves("Ua-46273_DietM1", "IntCal13", "Tagus", 40, 10);
R_Date("Ua-46273", 7198, 40);
Mix_Curves("Ua-46272_DietM1", "IntCal13", "Tagus", 47, 10);
R_Date("Ua-46272", 7166, 41);
Mix_Curves("TO-360_DietM1", "IntCal13", "Tagus", 36, 10);
R_Date("TO-360", 6990, 110);
Mix_Curves("TO-10216_DietM1", "IntCal13", "Tagus", 35, 10);
R_Date("TO-10216", 7040, 60);
Mix_Curves("Ua-47975_DietM1", "IntCal13", "Tagus", 46, 10);
R_Date("Ua-47975", 7116, 44);
Mix_Curves("TO-354_DietM1", "IntCal13", "Tagus", 24, 10);
R_Date("TO-354", 6970, 60);
Mix_Curves("TO-359_DietM1", "IntCal13", "Tagus", 41, 10);
R_Date("TO-359", 6960, 70);
Mix_Curves("TO-355_DietM1", "IntCal13", "Tagus", 25, 10);
R_Date("TO-355", 6780, 80);
Mix_Curves("TO-10217_DietM1", "IntCal13", "Tagus", 32, 10);
R_Date("TO-10217", 6620, 60);
Mix_Curves("TO-356_DietM1", "IntCal13", "Tagus", 59, 10);
R_Date("TO-356", 6360, 80);
Span("Site Use for Burial Activity");
Interval("Interval of Burial Activity Use");
};
Boundary("End of Burial Activity");
};
};

```

Code: Tagus Valley, Cabeço da Arruda, Model 1, Marine 2

```

Plot("CabecoArruda_Model1_Marine2_Queries")
{
Curve("IntCal13", "IntCal13.14c");
Curve("Marine13", "Marine13.14c");
Delta_R("Tagus", 140, 40);
Sequence("Cabeco da Arruda_Burial Activity")
{
Boundary("Start of Burial Activity");
Phase("Burial Activity")
{
Mix_Curves("TO-354_DietM2", "IntCal13", "Tagus", 13, 10);
R_Date("TO-354", 6970, 60);
Mix_Curves("TO-355_DietM2", "IntCal13", "Tagus", 14, 10);
R_Date("TO-355", 6780, 80);
Mix_Curves("TO-10217_DietM2", "IntCal13", "Tagus", 24, 10);
R_Date("TO-10217", 6620, 60);
Mix_Curves("TO-10216_DietM2", "IntCal13", "Tagus", 27, 10);
R_Date("TO-10216", 7040, 60);
};
};

```

```

Mix_Curves("TO-360_DietM2", "IntCal13", "Tagus", 29, 10);
R_Date("TO-360", 6990, 110);
Mix_Curves("Ua-46274_DietM2", "IntCal13", "Tagus", 33, 10);
R_Date("Ua-46274", 7200, 41);
Mix_Curves("Ua-46275_DietM2", "IntCal13", "Tagus", 33, 10);
R_Date("Ua-46275", 7263, 46);
Mix_Curves("Ua-46273_DietM2", "IntCal13", "Tagus", 34, 10);
R_Date("Ua-46273", 7198, 40);
Mix_Curves("TO-359_DietM2", "IntCal13", "Tagus", 35, 10);
R_Date("TO-359", 6960, 70);
Mix_Curves("Ua-47976_DietM2", "IntCal13", "Tagus", 36, 10);
R_Date("Ua-47976", 7261, 45);
Mix_Curves("Ua-47975_DietM2", "IntCal13", "Tagus", 41, 10);
R_Date("Ua-47975", 7116, 44);
Mix_Curves("Ua-46272_DietM1", "IntCal13", "Tagus", 43, 10);
R_Date("Ua-46272", 7166, 41);
Mix_Curves("", "IntCal13", "Tagus", 43, 10);
R_Combine("")
{
R_Date("Beta-127451", 7550, 100);
R_Date("AA-101343", 7351, 70);
};
Mix_Curves("TO-356_DietM2", "IntCal13", "Tagus", 59, 10);
R_Date("TO-356", 6360, 80);
Span("Site Use for Burial Activity");
Interval("Interval of Burial Activity Use");
};
Boundary("End of Burial Activity");
};
};

```

Code: Tagus valley, Moita do Sebastião, Cabeço da Arruda and Cabeço da Amoreira, Model 1, Marine 1

```

Plot("MS_CAR_CAM_Model1_Marine1_Queries")
{
Curve("IntCal13", "IntCal13.14c");
Curve("Marine13", "Marine13.14c");
Delta_R("Tagus", 140, 40);
Sequence("Moita do Sebastiao_Burial Activity")
{
Boundary("Start of Burial Activity");
Phase("Burial Activity")
{
Mix_Curves("Ua-46264_DietM1", "IntCal13", "Tagus", 43, 10);
R_Date("Ua-46264", 7621, 50);
Mix_Curves("Ua-46263_DietM1", "IntCal13", "Tagus", 43, 10);
R_Date("Ua-46263", 7483, 48);
Mix_Curves("Ua-46267_DietM1", "IntCal13", "Tagus", 44, 10);
R_Date("Ua-46267", 7120, 43);
Mix_Curves("TO-133_DietM1", "IntCal13", "Tagus", 44, 10);
R_Date("TO-133", 7200, 70);
Mix_Curves("Ua-46268_DietM1", "IntCal13", "Tagus", 50, 10);
R_Date("Ua-46268", 7243, 45);
Mix_Curves("TO-132_DietM1", "IntCal13", "Tagus", 45, 10);
R_Date("TO-132", 7180, 70);
Mix_Curves("TO-134_DietM1", "IntCal13", "Tagus", 46, 10);
R_Date("TO-134", 7160, 80);
Mix_Curves("Ua-46271_DietM1", "IntCal13", "Tagus", 50, 10);
R_Date("Ua-46271", 7236, 41);
Mix_Curves("Ua-46269_DietM1", "IntCal13", "Tagus", 39, 10);
R_Date("Ua-46269", 7141, 40);
Mix_Curves("Ua-47977_DietM1", "IntCal13", "Tagus", 44, 10);
R_Date("Ua-47977", 7138, 42);
Mix_Curves("TO-131_DietM1", "IntCal13", "Tagus", 51, 10);
R_Date("TO-131", 7240, 70);
Mix_Curves("Ua-47980_DietM1", "IntCal13", "Tagus", 45, 10);
R_Date("Ua-47980", 7105, 42);
Mix_Curves("Ua-46266_DietM1", "IntCal13", "Tagus", 44, 10);
R_Date("Ua-46266", 7095, 45);
Mix_Curves("Ua-47981_DietM1", "IntCal13", "Tagus", 39, 10);

```

```

R_Date("Ua-47981", 7058, 44);
Mix_Curves("Ua-46265_DietM1", "IntCal13", "Tagus", 34, 10);
R_Date("Ua-46265", 6986, 40);
Mix_Curves("Ua-47978_DietM1", "IntCal13", "Tagus", 31, 10);
R_Date("Ua-47978", 6753, 46);
Mix_Curves("TO-135_DietM1", "IntCal13", "Tagus", 59, 10);
R_Date("TO-135", 6810, 70);
Mix_Curves("Ua-46270_DietM1", "IntCal13", "Tagus", 30, 10);
R_Date("Ua-46270", 6743, 44);
Mix_Curves("", "IntCal13", "Tagus", 47, 10);
R_Combine("")
{
R_Date("Beta-127451", 7550, 100);
R_Date("AA-101343", 7351, 70);
};
Mix_Curves("Ua-46275_DietM1", "IntCal13", "Tagus", 39, 10);
R_Date("Ua-46275", 7263, 46);
Mix_Curves("Ua-47976_DietM1", "IntCal13", "Tagus", 45, 10);
R_Date("Ua-47976", 7261, 45);
Mix_Curves("Ua-46274_DietM1", "IntCal13", "Tagus", 39, 10);
R_Date("Ua-46274", 7200, 41);
Mix_Curves("Ua-46273_DietM1", "IntCal13", "Tagus", 40, 10);
R_Date("Ua-46273", 7198, 40);
Mix_Curves("Ua-46272_DietM1", "IntCal13", "Tagus", 47, 10);
R_Date("Ua-46272", 7166, 41);
Mix_Curves("TO-360_DietM1", "IntCal13", "Tagus", 36, 10);
R_Date("TO-360", 6990, 110);
Mix_Curves("TO-10216_DietM1", "IntCal13", "Tagus", 35, 10);
R_Date("TO-10216", 7040, 60);
Mix_Curves("Ua-47975_DietM1", "IntCal13", "Tagus", 46, 10);
R_Date("Ua-47975", 7116, 44);
Mix_Curves("TO-354_DietM1", "IntCal13", "Tagus", 24, 10);
R_Date("TO-354", 6970, 60);
Mix_Curves("TO-359_DietM1", "IntCal13", "Tagus", 41, 10);
R_Date("TO-359", 6960, 70);
Mix_Curves("TO-355_DietM1", "IntCal13", "Tagus", 25, 10);
R_Date("TO-355", 6780, 80);
Mix_Curves("TO-10217_DietM1", "IntCal13", "Tagus", 32, 10);
R_Date("TO-10217", 6620, 60);
Mix_Curves("TO-356_DietM1", "IntCal13", "Tagus", 59, 10);
R_Date("TO-356", 6360, 80);
Mix_Curves("TO-11819-R_DietM1", "IntCal13", "Tagus", 50, 10);
R_Date("TO-11819-R", 7300, 80);
Mix_Curves("Wk-32143_DietM1", "IntCal13", "Tagus", 53, 10);
R_Date("Wk-32143", 7132, 41);
Mix_Curves("Wk-32142_DietM1", "IntCal13", "Tagus", 54, 10);
R_Date("Wk-32142", 6910, 40);
Mix_Curves("TO-10225_DietM1", "IntCal13", "Tagus", 14, 10);
R_Date("TO-10225", 6550, 70);
Mix_Curves("TO-10218_DietM1", "IntCal13", "Tagus", 42, 10);
R_Date("TO-10218", 6630, 60);
Mix_Curves("Wk-26796_DietM1", "IntCal13", "Tagus", 44, 10);
R_Date("Wk-26796", 6329, 40);
Span("Site Use for Burial Activity");
Interval("Interval of Burial Activity Use");
};
Boundary("End of Burial Activity");
};
};

```

Code: Sado Valley, Cabeço das Amoreiras, Model 1, Marine**1**

```
Plot("CabecoAmoreiras_Model1_Marine1_Queries")
{
  Curve("IntCal13","IntCal13.14c");
  Curve("Marine13","Marine13.14c");
  Delta_R("Sado",-100,155);
  Sequence("CabecoAmoreiras_Burial Activity")
  {
    Boundary("Start of Burial Activity");
    Phase("Burial Activity")
    {
      Mix_Curves("Beta-125110_ DietM1 ", "IntCal13", "Sado", 24,
        10);
      R_Date("Beta-125110", 7230, 40);
      Mix_Curves("Ua-47974_ DietM1", "IntCal13", "Sado", 14, 10);
      R_Date("Ua-47974", 6645, 42);
      Mix_Curves("Ua-47973_ DietM1", "IntCal13", "Sado", 14, 10);
      R_Date("Ua-47973", 6484, 39);
      Span("Site Use for Burial Activity");
      Interval("Interval of Burial Activity Use");
    };
    Boundary("End of Burial Activity");
  };
};
```

Code: Sado Valley, Cabeço das Amoreiras, Model 1, Marine**2**

```
Plot("CabecoAmoreiras_Model1_Marine2_Queries")
{
  Curve("IntCal13","IntCal13.14c");
  Curve("Marine13","Marine13.14c");
  Delta_R("Sado",-100,155);
  Sequence("CabecoAmoreiras_Burial Activity")
  {
    Boundary("Start of Burial Activity");
    Phase("Burial Activity")
    {
      Mix_Curves("Beta-125110_ DietM1 ", "IntCal13", "Sado", 13,
        10);
      R_Date("Beta-125110", 7230, 40);
      R_Date("Ua-47974", 6645, 42);
      R_Date("Ua-47973", 6484, 39);
      Span("Site Use for Burial Activity");
      Interval("Interval of Burial Activity Use");
    };
    Boundary("End of Burial Activity");
  };
};
```

Code: Sado Valley, Vale de Romeiras, Model 1, Marine 1

```
Plot("ValeRomeiras_Model1_Marine1_Queries")
{
  Curve("IntCal13","IntCal13.14c");
  Curve("Marine13","Marine13.14c");
  Delta_R("Sado",-100,155);
  Sequence("ValeRomeiras_Burial Activity")
  {
    Boundary("Start of Burial Activity");
    Phase("Burial Activity")
    {
      Mix_Curves("Ua-47983_ DietM1", "IntCal13", "Sado", 10, 10);
      R_Date("Ua-47983", 6625, 51);
      Mix_Curves("Ua-46972_ DietM1", "IntCal13", "Sado", 12, 10);
      R_Date("Ua-46972", 7640, 55);
      Span("Site Use for Burial Activity");
      Interval("Interval of Burial Activity Use");
    };
  };
};
```

```
Boundary("End of Burial Activity");
};
};
```

Code: Sado Valley, Vale de Romeiras, Model 1, Marine 2

```
Plot("ValeRomeiras_Model1_Marine2_Queries")
{
  Curve("IntCal13","IntCal13.14c");
  Sequence("ValeRomeiras_Burial Activity")
  {
    Boundary("Start of Burial Activity");
    Phase("Burial Activity")
    {
      R_Date("Ua-47983", 6625, 51);
      R_Date("Ua-46972", 7640, 55);
      Span("Site Use for Burial Activity");
      Interval("Interval of Burial Activity Use");
    };
    Boundary("End of Burial Activity");
  };
};
```

Code: Sado Valley, Cabeço do Pez, Model 1, Marine 1

```
Plot("CabecoPez_Model1_Marine1_Queries")
{
  Curve("IntCal13","IntCal13.14c");
  Curve("Marine13","Marine13.14c");
  Delta_R("Sado",-100,155);
  Sequence("CabecoPez_Burial Activity")
  {
    Boundary("Start of Burial Activity");
    Phase("Burial Activity")
    {
      Mix_Curves("Ua-46933_ DietM1 ", "IntCal13", "Sado", 8, 10);
      R_Date("Ua-46933", 6788, 46);
      Mix_Curves("Ua-46932_ DietM1", "IntCal13", "Sado", 16, 10);
      R_Date("Ua-46932", 6780, 48);
      Mix_Curves("Ua-46934_ DietM1", "IntCal13", "Sado", 17, 10);
      R_Date("Ua-46934", 6734, 51);
      Mix_Curves("Ua-46930_ DietM1", "IntCal13", "Sado", 23, 10);
      R_Date("Ua-46930", 5579, 41);
      Mix_Curves("Ua-46931_ DietM1", "IntCal13", "Sado", 30, 10);
      R_Date("Ua-46931", 6791, 43);
      Span("Site Use for Burial Activity");
      Interval("Interval of Burial Activity Use");
    };
    Boundary("End of Burial Activity");
  };
};
```

Code: Sado Valley, Cabeço do Pez, Model 1, Marine 2

```
Plot("CabecoPez_Model1_Marine2_Queries")
{
  Curve("IntCal13","IntCal13.14c");
  Curve("Marine13","Marine13.14c");
  Delta_R("Sado",-100,155);
  Sequence("CabecoPez_Burial Activity")
  {
    Boundary("Start of Burial Activity");
    Phase("Burial Activity")
    {
      R_Date("Ua-46933", 6788, 46);
      Mix_Curves("Ua-46932_ DietM2", "IntCal13", "Sado", 2, 10);
      R_Date("Ua-46932", 6780, 48);
      Mix_Curves("Ua-46934_ DietM2", "IntCal13", "Sado", 4, 10);
      R_Date("Ua-46934", 6734, 51);
      Mix_Curves("Ua-46930_ DietM2", "IntCal13", "Sado", 11, 10);
      R_Date("Ua-46930", 5579, 41);
    };
  };
};
```



```
Mix_Curves("Ua-46931_DietM2", "IntCal13", "Sado", 21, 10);
R_Date("Ua-46931", 6791, 43);
Span("Site Use for Burial Activity");
Interval("Interval of Burial Activity Use");
};
Boundary("End of Burial Activity");
};
};
```

Code: Sado valley, human remains, except VR8 (Ua-46968) and CP2 (Ua-46930), Model 1, Marine 1

```
Plot("Sado valley_Model1_Marine1_Queries")
{
Curve("IntCal13", "IntCal13.14c");
Curve("Marine13", "Marine13.14c");
Delta_R("Sado", -100, 155);
Sequence("Sado valley_Burial Activity")
{
Boundary("Sado valley_Start of Burial Activity");
Phase("Sado valley_Burial Activity")
{
Mix_Curves("Sac-1560_DietM1 ", "IntCal13", "Sado", 41, 10);
R_Date("Sac-1560", 7200, 130);
Mix_Curves("Beta-125110_DietM1 ", "IntCal13", "Sado", 24, 10);
R_Date("Beta-125110", 7230, 40);
Mix_Curves("Ua-47974_DietM1", "IntCal13", "Sado", 14, 10);
R_Date("Ua-47974", 6645, 42);
Mix_Curves("Ua-47973_DietM1", "IntCal13", "Sado", 14, 10);
R_Date("Ua-47973", 6484, 39);
Mix_Curves("Ua-46933_DietM1 ", "IntCal13", "Sado", 8, 10);
R_Date("Ua-46933", 6788, 46);
Mix_Curves("Ua-46932_DietM1", "IntCal13", "Sado", 16, 10);
R_Date("Ua-46932", 6780, 48);
Mix_Curves("Ua-46934_DietM1", "IntCal13", "Sado", 17, 10);
R_Date("Ua-46934", 6734, 51);
Mix_Curves("Ua-46931_DietM1", "IntCal13", "Sado", 30, 10);
R_Date("Ua-46931", 6791, 43);
Mix_Curves("Ua-46972_DietM1", "IntCal13", "Sado", 12, 10);
R_Date("Ua-46972", 7640, 55);
Mix_Curves("Ua-47983_DietM1", "IntCal13", "Sado", 10, 10);
R_Date("Ua-47983", 6625, 51);
Mix_Curves("Ua-46310_DietM1", "IntCal13", "Sado", 10, 10);
R_Date("Ua-46310", 6305, 44);
Span("Sado valley_Use for Burial Activity");
Interval("Interval of Burial Activity Use");
};
Boundary("Sado valley_End of Burial Activity");
};
};
```

Code: Tagus and Sado valleys, human remains

```
Plot("Tagus_Sado_Model1_Marine1_Queries")
{
Curve("IntCal13", "IntCal13.14c");
Curve("Marine13", "Marine13.14c");
Delta_R("Tagus", 140, 40);
Delta_R("Sado", -100, 155);
Sequence("Burial Activity")
{
Boundary("Start of Burial Activity");
Phase("Burial Activity")
{
Mix_Curves("Ua-46264_DietM1", "IntCal13", "Tagus", 43, 10);
R_Date("Ua-46264", 7621, 50);
Mix_Curves("Ua-46263_DietM1", "IntCal13", "Tagus", 43, 10);
R_Date("Ua-46263", 7483, 48);
Mix_Curves("Ua-46267_DietM1", "IntCal13", "Tagus", 44, 10);
```

```
R_Date("Ua-46267", 7120, 43);
Mix_Curves("TO-133_DietM1", "IntCal13", "Tagus", 44, 10);
R_Date("TO-133", 7200, 70);
Mix_Curves("Ua-46268_DietM1", "IntCal13", "Tagus", 50, 10);
R_Date("Ua-46268", 7243, 45);
Mix_Curves("TO-132_DietM1", "IntCal13", "Tagus", 45, 10);
R_Date("TO-132", 7180, 70);
Mix_Curves("TO-134_DietM1", "IntCal13", "Tagus", 46, 10);
R_Date("TO-134", 7160, 80);
Mix_Curves("Ua-46271_DietM1", "IntCal13", "Tagus", 50, 10);
R_Date("Ua-46271", 7236, 41);
Mix_Curves("Ua-46269_DietM1", "IntCal13", "Tagus", 39, 10);
R_Date("Ua-46269", 7141, 40);
Mix_Curves("Ua-47977_DietM1", "IntCal13", "Tagus", 44, 10);
R_Date("Ua-47977", 7138, 42);
Mix_Curves("TO-131_DietM1", "IntCal13", "Tagus", 51, 10);
R_Date("TO-131", 7240, 70);
Mix_Curves("Ua-47980_DietM1", "IntCal13", "Tagus", 45, 10);
R_Date("Ua-47980", 7105, 42);
Mix_Curves("Ua-46266_DietM1", "IntCal13", "Tagus", 44, 10);
R_Date("Ua-46266", 7095, 45);
Mix_Curves("Ua-47981_DietM1", "IntCal13", "Tagus", 39, 10);
R_Date("Ua-47981", 7058, 44);
Mix_Curves("Ua-46265_DietM1", "IntCal13", "Tagus", 34, 10);
R_Date("Ua-46265", 6986, 40);
Mix_Curves("Ua-47978_DietM1 ", "IntCal13", "Tagus", 31, 10);
R_Date("Ua-47978", 6753, 46);
Mix_Curves("TO-135_DietM1", "IntCal13", "Tagus", 59, 10);
R_Date("TO-135", 6810, 70);
Mix_Curves("Ua-46270_DietM1", "IntCal13", "Tagus", 30, 10);
R_Date("Ua-46270", 6743, 44);
Mix_Curves("", "IntCal13", "Tagus", 47, 10);
R_Combine("")
{
R_Date("Beta-127451", 7550, 100);
R_Date("AA-101343", 7351, 70);
};
Mix_Curves("Ua-46275_DietM1", "IntCal13", "Tagus", 39, 10);
R_Date("Ua-46275", 7263, 46);
Mix_Curves("Ua-47976_DietM1", "IntCal13", "Tagus", 45, 10);
R_Date("Ua-47976", 7261, 45);
Mix_Curves("Ua-46274_DietM1", "IntCal13", "Tagus", 39, 10);
R_Date("Ua-46274", 7200, 41);
Mix_Curves("Ua-46273_DietM1", "IntCal13", "Tagus", 40, 10);
R_Date("Ua-46273", 7198, 40);
Mix_Curves("Ua-46272_DietM1", "IntCal13", "Tagus", 47, 10);
R_Date("Ua-46272", 7166, 41);
Mix_Curves("TO-360_DietM1", "IntCal13", "Tagus", 36, 10);
R_Date("TO-360", 6990, 110);
Mix_Curves("TO-10216_DietM1", "IntCal13", "Tagus", 35, 10);
R_Date("TO-10216", 7040, 60);
Mix_Curves("Ua-47975_DietM1", "IntCal13", "Tagus", 46, 10);
R_Date("Ua-47975", 7116, 44);
Mix_Curves("TO-354_DietM1", "IntCal13", "Tagus", 24, 10);
R_Date("TO-354", 6970, 60);
Mix_Curves("TO-359_DietM1", "IntCal13", "Tagus", 41, 10);
R_Date("TO-359", 6960, 70);
Mix_Curves("TO-355_DietM1 ", "IntCal13", "Tagus", 25, 10);
R_Date("TO-355", 6780, 80);
Mix_Curves("TO-10217_DietM1", "IntCal13", "Tagus", 32, 10);
R_Date("TO-10217", 6620, 60);
Mix_Curves("TO-356_DietM1", "IntCal13", "Tagus", 59, 10);
R_Date("TO-356", 6360, 80);
Mix_Curves("TO-11819-R_DietM1", "IntCal13", "Tagus", 50, 10);
R_Date("TO-11819-R", 7300, 80);
Mix_Curves("Wk-32143_DietM1", "IntCal13", "Tagus", 53, 10);
R_Date("Wk-32143", 7132, 41);
Mix_Curves("Wk-32142_DietM1", "IntCal13", "Tagus", 54, 10);
R_Date("Wk-32142", 6910, 40);
Mix_Curves("TO-10225_DietM1", "IntCal13", "Tagus", 14, 10);
```

```

R_Date("TO-10225", 6550, 70);
Mix_Curves("TO-10218_ DietM1 ", "IntCal13", "Tagus", 42, 10);
R_Date("TO-10218", 6630, 60);
Mix_Curves("Wk-26796_ DietM1", "IntCal13", "Tagus", 44, 10);
R_Date("Wk-26796", 6329, 40);
Mix_Curves("Sac-1560_ DietM1 ", "IntCal13", "Sado", 41, 10);
R_Date("Sac-1560", 7200, 130);
Mix_Curves("Beta-125110_ DietM1 ", "IntCal13", "Sado", 24,
10);
R_Date("Beta-125110", 7230, 40);
Mix_Curves("Ua-47974_ DietM1", "IntCal13", "Sado", 14, 10);
R_Date("Ua-47974", 6645, 42);
Mix_Curves("Ua-47973_ DietM1", "IntCal13", "Sado", 14, 10);
R_Date("Ua-47973", 6484, 39);
Mix_Curves("Ua-46933_ DietM1 ", "IntCal13", "Sado", 8, 10);
R_Date("Ua-46933", 6788, 46);
Mix_Curves("Ua-46932_ DietM1", "IntCal13", "Sado", 16, 10);
R_Date("Ua-46932", 6780, 48);
Mix_Curves("Ua-46934_ DietM1", "IntCal13", "Sado", 17, 10);
R_Date("Ua-46934", 6734, 51);
Mix_Curves("Ua-46931_ DietM1", "IntCal13", "Sado", 30, 10);
R_Date("Ua-46931", 6791, 43);
Mix_Curves("Ua-46930_ DietM1", "IntCal13", "Sado", 23, 10);
R_Date("Ua-46930", 5579, 41);
Mix_Curves("Ua-46972_ DietM1", "IntCal13", "Sado", 12, 10);
R_Date("Ua-46972", 7640, 55);
Mix_Curves("Ua-47983_ DietM1", "IntCal13", "Sado", 10, 10);
R_Date("Ua-47983", 6625, 51);
Mix_Curves("Ua-46310_ DietM1", "IntCal13", "Sado", 10, 10);
R_Date("Ua-46310", 6305, 44);
Span("Use for Burial Activity");
Interval("Interval of Burial Activity Use");
};
Boundary("End of Burial Activity");
}

```